

#0000 60963



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CORRES CONTROL
 OUTGONG LTR NO

DOE ORDER # 400 J
96 RF 00553

January 24, 1996

96-RF-00553
 96-RM-ER-0011-KH

DIST	LT	EN
Bengal, P.		
Benson, C. A.		
Buddy, M. S.		
Evans, C. S.		
Findley, M.		
Guinn, G.		
Guinn, L.		
Hopkins, J.		
Jenkins, K.		
Jierree, C.		
Konwinski, G.		
Law, J. E.	X	X
Luker, R. S.		
McAnally, J. L.		
McHugh, M. F.		
Motyl, K. M.		
Parker, A. M.	X	X
Primrose, A. I.		
Power, A.		
Schubbe, D. I.		
Steffen, D. E.		
Tyson, A. M.		
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TRANSMITTAL OF THE NOTES ON THE CLEANUP STANDARDS MEETING
 (KH00003NS1A) - JEL-019-96

Action None required

Enclosed are the notes taken at the Cleanup Standards Meeting of January 11, 1996 Meeting attendees are listed

If you have any questions, please call me at extension 4385

John E. Law, P E
 Remediation Manager
 Sitewide Actions

ALP bll

Enclosure
 As Stated

22 041 F

L. Brooks X X
J E LAW X X
T. LOVSTAD X X
H. PRIMROSE X X

ER REC CTR (2) X X
 CORRES CONTROL X X
 RMRS CC X X
 TRAFFIC X X

CLASSIFICATION

UCNI		
UNCLASSIFIED	X	X
CONFIDENTIAL		
SECRET		

DOCUMENT CLASSIFICATION

REVIEW WAIVER PER

CLASSIFICATION

OFFICE

IN REPLY TO RFP CC

NO NA

ACTION ITEM

STATUS ☒ OPEN ☒ CLOSED

☐ PARTIAL

LTR

APPROVALS ALP

ORIG & TYPIST INITIALS

ALP-bll

ADMIN RECORD

DOCUMENT CLASSIFICATION
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Notes on Cleanup Standards Meeting - January 11, 1996

The working group developing cleanup standards for RFETS met on January 11, 1996 at the EPA Conference Center. The meeting was held from 12:30 pm until 5:00 pm and was mediated by personnel from Keystone. The attached agenda was loosely followed, and the discussions for each subject are summarized below.

Attendees

Todd Barker	Keystone	Sandy Marek	CDPHE
Laura Brooks	Kaiser-Hill	Tim Meaney	Keystone
Judy Bruch	CDPHE	Annette Primrose	RMRS
Susan Chalkie	CDPHE	John Rampe	DOE
Chris Dayton	Kaiser-Hill	Joe Schieffelin	CDPHE
Rick Di Salvo	DOE	Tim Rehder	EPA
Bill Fitch	DOE	Dave Shelton	Kaiser-Hill
Bill Fraser	EPA	Steve Slaten	DOE
Tom Greengard	SAIC	Carl Spreng	CDPHE
Gary Kleeman	EPA	Sara Stokes	Keystone
John Law	RMRS	Robert Terry	CDPHE-Rad Control
Tim Lovseth	RMRS	Karen Wiemelt	Kaiser-Hill

Opening Remarks

Keystone reminded the working group that we either need to reach consensus or need to frame options. The January 9 text provided by Keystone does not replace the single text but should be used as a tool by the group.

Subsurface Soils

There are three options (see attached). Option 1 - CDPHE/Joe Schieffelin felt that the corrective action language could be dropped if the 100 X multiplier is changed and a data analysis is done, instead of using a blanket approach based on 100 X MCLs. Tim Rehder asked why yesterday 100 X MCLs was too high, and now it may not be. Joe felt that the 100 times should not be followed blindly.

Chris Dayton and John Law both pointed out that the proposed action levels and standards framework is a holistic system where all action levels are inter-related and all can trigger actions. Tim Rehder said that the Vision's intent is to protect surface water and prevent vertical and horizontal contamination.

Dave Shelton asked if the subsurface action levels based on 100 X MCLs were developed by the group. Gary Kleeman said that these action levels were developed to do source removals, and it was known that existing data was not sufficient to identify sources, but groundwater contamination would point to the source. Dave asked if it was fair to say the sources were known and the group affirmed that this was true. Dave stated that then the real purpose of the subsurface soil action levels must be to guide excavation.

Todd asked if language should be added to the single text stating that to trigger actions, subsurface soil levels protective of groundwater at 100 times MCLs will be used along with process knowledge, known groundwater contamination and the actions will be done in accordance with the environmental priority list. Then the action levels would be used as standards for source removal. Most agreed.

Joe Schieffelin felt that Tier I levels should trigger an accelerated action. Tier II would catch the rest and would require some sort of source management, not source removal. John Law asked if this was to protect the groundwater resource. Todd gave Jackie's (CDPHE) position that RFETS must minimize or prevent vertical and horizontal migration to protect resources.

John Law asked if it would help to develop language to say that regrading, revegetation and use of soil surface vegetative covers would be part of the final remedy to prevent infiltration of runoff. Joe said absolutely. This addresses CDPHE concerns of isolating or capping sources.

Dave Shelton said that the monitoring well network, developed by consensus, was designed to determine whether plumes were spreading. This network will remain as a commitment to detect whether plumes are spreading. Tim Rehder felt that the inclusion of an anti-infiltration system may close this subject.

Todd recommended adding language stating that sources which have been identified will be removed and that some sort of a vegetative cap would be included in the final remedy. Tim Rehder liked this suggestion, however Joe felt that not all sources have been identified. Annette Primrose pointed out that all suspected environmental risks were on the prioritization list including those with insufficient data to characterize at this time. Joe felt that by adding language about minimizing precipitation, reducing flow through, using drainage control, then the word "eliminate" could be deleted from the proposed language, leaving "minimize spread".

Todd stated that this was not an option. The group must either use Option 2, or modify Option 1.

Joe asked to add language to Tier I to say that we will use process knowledge to identify sources and that we meant to do removals of all known sources. All available information will be used to identify these sources. The group concurred.

Todd asked if this tied up the Tier I discussion, and the group said yes. He then asked about Tier II. Joe felt that if a statement were added to commit to control precipitation infiltration and groundwater, that this would be acceptable. John Law requested changing "commit to minimize" to "word-smithing handout 3" and adding it to Tier II would be sufficient, and that if DOE felt more comfortable adding what actions would be used, then this would be all right.

Steve Slaten said that this would define the upper limit of the requirements. Joe said that DOE was taking the risk that CDPHE would over apply this requirement, and CDPHE was taking the risk that DOE will do nothing.

Ryan's Pit was used as an example. CDPHE said that after the source was gone, if the groundwater was over 100 X MCLs, then some sort of infiltration control must be done. Steve Slaten asked if it could be agreed to bias towards this action, not a commitment. Joe felt that at least minimal action should be taken. John Rampe asked if we could manage contaminated groundwater below 100 X MCLs and Joe replied that Jackie said to minimize migration through source control and groundwater management.

Rick Di Salvo said that this is tied to a larger scale plan. John Law replied that there is a difference between accelerated actions and final site closure. RFETS must complete actions and then see if these are sufficient. Final closures should consider long term actions to minimize infiltration and groundwater migration. Steve Slaten felt that 100 X MCLs were OK for accelerated actions, that we hope these will prove to be OK for the final action. John Law felt that this would be a management risk.

Joe thought that this was not inconsistent with final remedy.

Steve Slaten requested that language be included about controls as above. Tim Rehder said that this makes sense, because of waste disposal and CAMUs proposed for the site. Steve Slaten said that professional judgment would be used on each and every one of these.

Joe said the groundwater network will tell us if there's a problem. We will not be protecting groundwater, just minimizing releases. Rick Di Salvo felt that this would be the final remedy. Joe said fine and to add that Tier II actions will be the final remedy (after the RI/FS).

Todd said that the two alternatives will be

- 1 Option B page 6 with Tier I changes as above, existing sources, etc
- 2 Option B page 6 as above with integrated approach with bias for surface water control Todd will draft this with Joe

These will go to principals on the 19th if the group doesn't agree

The working group split into two groups to more efficiently deal with the issues The group discussing surface water and Temporary Treatment Facility went to a different room - Judy Bruch, Sandy Marek, John Law, John Rampe, Bill Fraser, Chris Dayton and Sarah Stokes

RCRA Closure

Keystone provided hand out (4) Todd gave the two options being discussed as

- 1 Prioritized RCRA closures When time arrives, maybe enough cleanup would already be done to allow closure
- 2 CDPHE feels that RCRA closures are different and required

Rick Di Salvo felt that everyone agrees to option 1, what does option 2 buy? Joe said that economy of scale could be achieved There still must be performance standards Greg (last name unknown) thought that hazardous waste and constituents could be dealt with without calling it closure

Dave Shelton said that there is some contamination in the Solar Pond area, and cadmium in some soils is a risk He does not deny that there is nitrate in the groundwater and that hazardous waste was stored here However, under CERCLA, cleanup would be based on risk Karen Wiemelt pointed out that only 1 spot was above the residential 10^{-6} risk

Dave Shelton said that under the proposed RCRA closure, substantial work must be done with no benefit and would be in conflict with what is done at the rest of the site Blind following of RCRA leads to spending many dollars with little benefit

Todd asked if RCRA units at RFETS need closure Dave Shelton replied sure, however, the group is now only talking about what is proposed for the Solar Ponds Todd asked what RFETS proposed and Dave Shelton replied that there was a lot more flexibility in RCRA than CDPHE feels

Joe said that the threshold for determining whether hazardous material is present is based on 10^{-6} risk and the CDPHE screen If soil is contaminated with hazardous waste below 10^{-6} then these are not constituents are no longer considered hazardous waste and the RCRA unit can be clean closed

Rick DiSalvo said that there is flexibility in RCRA to draw boundaries around soils, do a corrective action, then close

Karen Wiemelt said that the site is below PPRGs for nitrates Joe stated then the site may be OK Greg asked whether the nitrates were from a controlled source and it was explained that these were felt to be hazardous waste as they were mixed with hazardous and derived from nitric acid

Rick Di Salvo said that if the Solar Ponds were really below risk range, then dig up hot spots We are making a mountain out of a mole hill Dave Shelton mentioned that there are other implications Karen said nitrates are all below PPRGs in soil However the next step is impact on groundwater Rick said if nitrate in soil is not hazardous, then it is not an issue Karen felt that the issue is that nitrates are still releasing to groundwater which is around 300 mg/L

Joe said that the site should not apply the risk based standard, but should apply the surface water standard as the groundwater is releasing to surface water

Todd said that the attorneys will look at RCRA flexibility

Dave Shelton said Joe has argued that CDPHE is using flexibility in meeting RCRA requirements by saying that if similar work is being done nearby, it's cheap to extend work-in-progress over the RCRA unit. However, what do these words mean? How do you deal with inconsistencies between the requirements of RCRA closure and what is planned nearby?

Dave continued that closing RCRA units using more stringent standards would create islands of cleanliness and feels that is not the State's intent. Joe stated that his job is to make sure regulations are followed.

Tim Rehder was asked how the EPA closed RCRA units. Tim felt that he would have an answer on how this would be interpreted for OU 7 within a few days. RCRA is an ARAR for OU 7, however, if a risk of 10^{-6} is met, there may not need to be an ARARs analysis.

Joe said if other than a residential receptor is used for the risk analysis, then institutional controls are in place and ARARs will apply. John Law asked how much post closure care is required. For very little risk, there should be very little care.

Dave asked if a RCRA cap may not be required for very little risk? However, CDPHE felt that a RCRA or equivalent cap would be required. Joe said the method to achieve the cap is flexible, but a cap is required. Karen Wiemelt asked whether as long as the caps prevent releases at the point of compliance (POC), these would be sufficient. Susan Chalkie replied that already contaminated groundwater cannot increase size of the unit.

Karen then pointed out that the IA would have one point of compliance, and another POC must be set for the Solar Ponds different standards. Joe Schieffelin favored a dirty close and use of 264 regulations for POC. Dave Shelton remarked that this makes it a RCRA unit forever. Joe agreed and remarked that the same would be true if the Site constructed a CAMU. Post closure requirements can be handled by ROD, not the RCRA permit.

Rick said then RCRA closure wells would be inside the cap. Joe asked how many units would be dirty closed, only Solar Ponds. Rick said IA would contain small dirty closed RCRA units. Joe felt that these should be clean closed. Rick pointed out that these would then be clean islands in a slightly dirty sea. Steve Slaten pointed out that miles of process waste times must be clean closed along with building foundations and storage units.

Rick inquired as to the status of the Landfill. Joe responded that it was an interim status and solid waste management unit, since it received hazardous waste after 1980.

Todd asked if there was a clear implication for tank clean closure? Yes (Steve Slaten). How about Solar Ponds? Rick Di Salvo and Steve Slaten believe that CDPHE requires the site to clean-up the nitrate and cap this area if not clean closed. He then asked the state if there could be flexibility. Joe says no, that CDPHE must do some homework in flexibility. Steve Slaten believes states have discretion in this matter.

Gary Kleeman said clean closure of RCRA units based on 10^{-6} residential will give a checkerboard since no other clean up will be based on residential exposure pathways. Rick asked the group what would happen if the site decided not to close RCRA units, and other things were done to protect groundwater/soils/surface water. Post-Rod care would not apply, and someday enough time and regulations would change to allow closure. Joe said that this was an untenable position.

Tim Rehder recommended that the site conduct closures in line with the priority list. If the regulatory requirements change, then adjustments will be made. Dave Shelton said if no impacts are caused by RCRA units, then strictly to close the site, cleanup without any benefit must be done. Tim Rehder also felt that this would create clean islands in a dirty sea. Rick felt that there would be dirty islands of monitoring wells inconsistent with the monitoring system and hoped that regulations changed before this was necessary.

Susan reminded the group that just because we trashed the rest of site, we don't get relief from RCRA Rick asked the group to recognize that the site won't clean close RCRA units Joe felt that there could be some flexibility on monitoring wells and the POC However, there is internal disagreement on the 1,000 year cap requirement and whether this is applicable to the unit High level school of thought says yes, lower level school of thought thinks no

If the lower level prevails, this alleviates about one half of the problem Dave Shelton said that it helps alleviate problem in inconsistencies Joe said to then use a RCRA equivalent cap Susan added that geo-composite liners (clay/composite liners) would meet this requirement

Joe said for groundwater compliance points, no new wells were needed for the Solar Ponds Steve asked if there was a need to put a well through the cap to satisfy RCRA, and was assured that there was some flexibility there

Todd said options were emerging, and there was room to explore these The options are

- 1 Clean close all RCRA units
- 2 Agree never to close RCRA units*
- 3 Close each unit as per the environmental priority list
- 4 Dirty close each unit as per the environmental priority list
- 5 Close under Corrective Actions and treat all contamination the same*

*CDPHE stated that they will not agree to these options

Joe will never agree to revert to only doing corrective actions at the RCRA units because this is not the right thing to do and jeopardizes the entire program Even if this were legal, he would not agree to it Susan said that it is clear in the regulations that this couldn't be legal

Todd stated that there are two options on the soil cleanup levels, and five options on RCRA closure It will be clearly stated that not everyone in the group agrees on the validity of these options

Meeting Wrap-up and Next Steps

The surface water break-out group returned Joe stated that nitrate is problematic and that we need a consensus view John Rampe said that from the surface water management standpoint Pending agreement with downstream water users, meeting 100 mg/l at the surface water POC is fine during the interim with Option B in place (segment 4)

Laura Brooks will develop position paper on RCRA issues and set up a conference call for next week

By Tuesday, Keystone will revise the document and will frame the areas of agreement and options The working group Leads will meet to edit the text and incorporate the 15 MREM decision A final draft will be delivered to the principals

Wednesday 12 30 - the Leads will meet and review issue document The document will be provided by Keystone by early Tuesday so everyone has a chance to review it prior to the meeting

Todd inquired if there were any other issues and John Rampe said that he had two

- 1 Cities will want to commit all parties to develop an overall water management strategy (Todd felt that this was appropriate for another group)
- 2 Removing buffer zone from NPL John Law asked if the large clean area could be taken off

Todd mentioned that this second item was already discussed. But Dave Shelton replied that the issue discussed had been how to manage the buffer zone. Tim Rehder stated that Stakeholders do not want access to the site at this time. Joe Schieffelin felt that the site could go ahead and pursue this issue and CDPHE would not care. Dave Shelton said that if there is a clear path forward to lop off chunks of the site, can EPA provide guidance on how to do this. Tim Rehder promised to get back next week with an answer.

Todd reviewed the conclusions.

Keystone will capture the agreements/disagreements for an audience of the negotiating team and working group outsiders.

The single text is not as critical, it is more of an implementation document which can wait until decisions are made, then be revised and issued for guidance.

ACTION LEVELS TASK GROUP
January 11, 1996
12:30 - 5:00 PM EPA Conference Center

Agenda

- | | |
|-------|---|
| 12 30 | Surficial soil, subsurface soil, and corrective action |
| 2 00 | RCRA Closure, including discussion of Environmental Priority List |
| 3 30 | Temporary Treatment Facility |
| 4 30 | Other Issues and Next Steps |
| 5 00 | Adjourn |

Potential Path Forward for RCRA Closure

It has been suggested that an analysis be performed to determine the implications of RCRA closure for land-based RCRA units including OU4, OU7, OU9, and OU10. Specifically, it has been suggested that the analysis consider 1) flexibility that may exist in applying RCRA closure requirements, and 2) remedial actions that may be taken in areas adjacent to RCRA Closure units to determine if these remedial actions can be extended to RCRA Closure units or may affect the closure requirements for the RCRA unit. Furthermore, the RCRA Closure analysis should consider the expected ranking on the Environmental Priority List (i.e., closure action for a low priority RCRA unit may be affected by action taken to address higher priority items).

However, because remedial decisions have not been made, the value of such an analysis may be limited.

Based on discussions and suggestions from the January 10 negotiating session

- Perform, to the extent possible, the analysis suggested above
- Identify principles to guide closure of RCRA units
 Possible principles include
 - All environmental actions at RFETS, including closure of RCRA units, will be prioritized according to the Environmental Priority List;
 - Remedial actions adjacent to a RCRA Closure unit will be considered to determine whether they can be extended to the RCRA unit to meet RCRA closure requirements, and
 - Remedial actions adjacent to a RCRA Closure unit will be considered to determine whether and how they affect the RCRA closure requirements for a RCRA Closure unit

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Options for Path Forward for Subsurface Soil Action Levels

Currently, tentative agreement has been reached on Tier I subsurface soil action levels. Options exist for Tier II action levels.

OPTION 1

Based on discussions and suggestions from the January 10 negotiating session

- Leave Tier II as shown on page 6 (Keystone Jan 9 Draft) under areas of tentative agreement

Tier II includes

- a) action levels that will be established on the basis of Construction Worker exposure, and
- b) those instances where additional subsurface soil may need to be remediated or managed to protect surface water or ecological resources as determined on a case-by-case basis

Action Exceedance of Tier II action levels triggers a process to identify, evaluate and implement efficient, cost-effective, and feasible remediation or management actions

- Change the current action levels for Tier I (100 x MCLs) to a level lower than 100 x MCLs (e.g., 1 x MCLs, 50 x MCLs, 99 x MCLs)

Determination of the appropriate level will be determined through an analysis of available data. The analysis would be performed jointly in an agreed upon timeframe that would admittedly be intensive (e.g., now through Feb 5, or Feb 14, Feb 29)

Concurrent with analysis of subsurface soil Tier I action levels, analyze other action levels for surface soil, ground water, and surface water

OPTION 2

Revise/soften/wordsmith the RCRA corrective action language suggested by the State for Tier II "and/or prevent continuing release of hazardous constituents from the contaminated soil via any mechanism "

OPTION 3

Frame options for the Principles

ACTION LEVELS CONCEPT*

Tier I 10^{-4} requires action

Tier II 10^{-6} requires evaluation Possibly, 10^{-6} plus corrective action language (e g ,
"and/or prevent continuing release of hazardous constituents from the
contaminated soil via any mechanism")

With the exception of surface water, decision of the type of action will include determination of
standard

* If the ground water framework is revised by switching Tier I and Tier II

1/10/96
draft

Option B. Tier 2 (Soil Clean-up Standards for RCRA Corrective Action and CERCLA Remedy Selection Decisions). Item 3 as described above but would also include those instances where additional surface soil may need to be remediated or managed to protect surface water or ecological resources or to ~~control, minimize or eliminate migration of contaminants horizontally or vertically through an appropriate combination of source control, groundwater management, or other alternatives~~ as determined on a case-by-case basis

by